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*THE LIMITATIONS OF THE COMPARATIVE  
METHOD OF ANTHROPOLOGY.\**

MODERN Anthropology has discovered the fact that human society has grown and developed everywhere in such a manner that its forms, its opinions and its actions have many fundamental traits in common. This momentous discovery implies that laws exist which govern the development of society, that they are applicable to our society as well as to those of past times and of distant lands; that their knowledge will be a means of understanding the causes furthering and retarding civilization; and that, guided by this knowledge, we may hope to govern our actions so that the greatest benefit to mankind will accrue from them. Since this discovery has been clearly formulated, anthropology has begun to receive that liberal share of public interest which was withheld from it as long as it was believed that it could do no more than record the curious customs and beliefs of strange peoples; or, at best, trace their relationships, and thus elucidate the early migrations of the races of man and the affinities of peoples.

While early investigators concentrated their attention upon this purely historical problem, the tide has now completely turned, so that there are even anthropologists who declare that such investigations belong to the historian, and that anthropological studies must be confined to researches on the laws that govern the growth of society.

A radical change of method has accompanied this change of views. While formerly identities or similarities of culture were considered incontrovertible proof of historical connection, or even of common origin, the new school declines to consider them as such, but interprets them as results of the uniform working of the human mind. The most pronounced adherent of this view

in our country is Dr. D. G. Brinton, in Germany the majority of the followers of Bastian, who in this respect go much farther than Bastian himself. Others, while not denying the occurrence of historical connections, regard them as insignificant in results and in theoretical importance as compared to the working of the uniform laws governing the human mind. This is the view of by far the greater number of living anthropologists.

This modern view is founded on the observation that the same ethnical phenomena occur among the most diverse peoples, or, as Bastian says, on the appalling monotony of the fundamental ideas of mankind all over the globe. The metaphysical notions of man may be reduced to a few types which are of universal distribution; the same is the case in regard to the forms of society, laws and inventions. Furthermore, the most intricate and apparently illogical ideas and the most curious and complex customs appear among a few tribes here and there in such a manner that the assumption of a common historical origin is excluded. When studying the culture of any one tribe, more or less close analoga of single traits of such a culture may be found among a great diversity of peoples. Instances of such analoga have been collected to a vast extent by Tylor, Spencer, Bastian, Andree, Post and many others, so that it is not necessary to give here any detailed proof of this fact. The idea of a future life, the one underlying shamanism; inventions such as fire and the bow; certain elementary features of grammatical structure—these will suggest the classes of phenomena to which I refer. It follows from these observations that when we find an analogon of single traits of culture among distant peoples, the presumption is not that there has been a common historical source, but that they have arisen independently.

\* Paper read at the meeting of the A. A. A. S. at Buffalo.

But the discovery of these universal ideas is only the beginning of the work of the anthropologist. Scientific inquiry must answer two questions in regard to them: First, what is their origin? and second, how do they assert themselves in various cultures?

The second question is the easier one to answer. The ideas do not exist everywhere in identical form, but they vary. Sufficient material has been accumulated to show that the causes of these variations are either external, that is founded in environment—taking the term environment in its widest sense—or internal, that is founded on psychological conditions. The influence of external and internal factors upon elementary ideas embodies one group of laws governing the growth of culture. Therefore, our endeavors must be directed to showing how such factors modify elementary ideas.

The first method that suggests itself and which has been generally adopted by modern anthropologists is to isolate and classify causes by grouping the variants of certain ethnological phenomena according to external conditions under which the people live, among whom they are found, or to internal causes which influence their minds; or inversely, by grouping these variants according to their similarities. Then the correlated conditions of life may be found.

By this method we begin to recognize even now with imperfect knowledge of the facts what causes may have been at work in shaping the culture of mankind. Friedrich Ratzel and W J McGee have investigated the influence of geographical environment on a broader basis of facts than Ritter and Guyot were able to do at their time. Sociologists have made important studies on the effects of the density of population and of other simple social causes. Thus the influence of external factors upon the growth of society is becoming clearer.

The effects of psychical factors are also being studied in the same manner. Stoll has tried to isolate the phenomena of suggestion and of hypnotism and to study the effects of their presence in the cultures of various peoples. Inquiries into the mutual relations of tribes and peoples begin to show that certain cultural elements are easily assimilated while others are rejected, and the time-worn phrases of the imposition of culture by a more highly civilized people upon one of lower culture that has been conquered are giving way to more thorough views on the subject of exchange of cultural achievements. In all these investigations we are using sound, inductive methods in order to isolate the causes of observed phenomena.

The other question in regard to the universal ideas, namely that of their origin, is much more difficult to treat. Many attempts have been made to discover the causes which have led to the formation of ideas 'that develop with iron necessity wherever man lives.' This is the most difficult problem of anthropology and we may expect that it will baffle our attempts for a long time to come. Bastian denies that it is possible to discover the ultimate sources of inventions, ideas, customs and beliefs which are of universal occurrence. They may be indigenous, they may be imported, they may have arisen from a variety of sources, but they are there. The human mind is so formed that it invents them spontaneously or accepts them whenever they are offered to it. This is the much misunderstood elementary idea of Bastian.

To a certain extent the clear enunciation of the elementary idea gives us the psychological reason for its existence. To exemplify: the fact that the land of the shadows is so often placed in the west suggests the endeavor to localize it at the place where the sun and the stars vanish. The mere statement that primitive man considers animals as gifted with all the qualities of

man shows that the analogy between many of the qualities of animals and human qualities has led to the generalization that all the qualities of animals are human. In other cases the causes are not so self-evident. Thus the question why all languages distinguish between the self, the person addressed and the person spoken of, and why most languages do not carry out this sharp, logical distinction in the plural is difficult to answer. The principle when carried out consistently requires that in the plural there should be a distinction between the 'we' expressing the self and the person addressed and the 'we' expressing the self and the person spoken of, which distinction is found in comparatively few languages only. The lesser liability to misunderstandings in the plural explains this phenomenon partly but hardly adequately. Still more obscure is the psychological basis in other cases, for instance, in that of widely spread marriage customs. Proof of the difficulty of this problem is the multitude of hypotheses that have been invented to explain it in all its varied phases.

In treating this, the most difficult problem of anthropology, the point of view is taken that if an ethnological phenomenon has developed independently in a number of places its development has been the same everywhere; or, expressed in a different form, that the same ethnological phenomena are always due to the same causes. This leads to the still wider generalization that the sameness of ethnological phenomena found in diverse regions is proof that the human mind obeys the same laws everywhere. It is obvious that if different historical developments could lead to the same results, that then this generalization would not be tenable. Their existence would present to us an entirely different problem, namely, how it is that the developments of culture so often lead to the same results. It must, therefore, be clearly understood that an-

thropological research which compares similar cultural phenomena from various parts of the world, in order to discover the uniform history of their development, makes the assumption that the same ethnological phenomenon has everywhere developed in the same manner. Here lies the flaw in the argument of the new method, for no such proof can be given. Even the most cursory review shows that the same phenomena may develop in a multitude of ways.

I will give a few examples: Primitive tribes are almost universally divided into clans which have totems. There can be no doubt that this form of social organization has arisen independently over and over again. The conclusion is certainly justified that the psychical conditions of man favor the existence of a totemistic organization of society, but it does not follow that totemistic society has developed everywhere in the same manner. Dr. Washington Matthews has shown that the totems of the Navajo have arisen by association of independent clans. Capt. Bourke has pointed out that similar occurrences gave origin to the Apache clans, and Dr. Fewkes has reached the same conclusion in regard to some of the Pueblo tribes. On the other hand, we have proof that clans may originate by division. I have shown that such events took place among the Indians of the North Pacific coast. Association of small tribes, on the one hand, and disintegration of increasing tribes, on the other, has led to results which appear identical to all intents and purposes.

Here is another example. Recent investigations have shown that geometrical designs in primitive art have originated either from naturalistic forms which were gradually conventionalized or from technical motives, or that they were primarily geometrical or that they were derived from symbols. From all these sources the same

forms have developed. Out of designs representing diverse objects grew in course of time frets, meanders, crosses and the like. Therefore the frequent occurrence of these forms proves neither common origin nor that they have always developed according to the same psychical laws. On the contrary, the identical result may have been reached on four different lines of development and from an infinite number of starting points.

Another example may not be amiss: The use of masks is found among a great number of peoples. The origin of the custom of wearing masks is by no means clear in all cases, but a few typical forms of their use may easily be distinguished. They are used for deceiving spirits as to the identity of the wearer. The spirit of a disease who intends to attack the person does not recognize him when he wears a mask, and the mask serves in this manner as a protection. In other cases the mask represents a spirit which is personified by the wearer, who in this shape frightens away other hostile spirits. Still other masks are commemorative. The wearer personifies a deceased person whose memory is to be recalled. Masks are also used in theatrical performances illustrating mythological incidents.\*

These few data suffice to show that the same ethnical phenomenon may develop from different sources. The simpler the observed fact, the more likely it is that it may have developed from one source here, from another there.

Thus we recognize that the fundamental assumption which is so often made by modern anthropologists cannot be accepted as true in all cases. We cannot say that the occurrence of the same phenomenon is always due to the same causes, and that thus it is proved that the human mind obeys the same laws everywhere. We must

\* See Richard Andree. *Ethnographische Parallelen und Vergleiche*. Neue Folge, 1889, pp. 107 ff.

demand that the causes from which it developed be investigated and that comparisons be restricted to those phenomena which have been proved to be effects of the same causes. We must insist that this investigation be made a preliminary to all extended comparative studies. In researches on tribal societies those which have developed through association must be treated separately from those that have developed through disintegration. Geometrical designs which have arisen from conventionalized representations of natural objects must be treated separately from those that have arisen from technical motives. In short, before extended comparisons are made, the comparability of the material must be proved.

The comparative studies of which I am speaking here attempt to explain customs and ideas of remarkable similarity which are found here and there. But they pursue also the more ambitious scheme of discovering the laws and the history of the evolution of human society. The fact that many fundamental features of culture are universal, or at least occur in many isolated places, interpreted by the assumption that the same features must always have developed from the same causes, leads to the conclusion that there is one grand system according to which mankind has developed everywhere; that all the occurring variations are no more than minor details in this grand uniform evolution. It is clear that this theory has for its logical basis the assumption that the same phenomena are always due to the same causes. To give an instance: We find many types of structure of family. It can be proved that paternal families have often developed from maternal ones. Therefore, it is said, all paternal families have developed from maternal ones. If we do not make the assumption that the same phenomena have everywhere developed from the same causes, then we may

just as well conclude that paternal families have in some cases arisen from maternal institutions, in other cases in other ways. To give another example: Many conceptions of the future life have evidently developed from dreams and hallucinations. Consequently, it is said, all notions of this character have had the same origin. This is also true only if no other causes could possibly lead to the same ideas.

We have seen that the facts do not favor the assumption of which we are speaking at all; that they much rather point in the opposite direction. Therefore we must also consider all the ingenious attempts at constructions of a grand system of the evolution of society as of very doubtful value, unless at the same time proof is given that the same phenomena could not develop by any other method. Until this is done, the presumption is always in favor of a variety of courses which historical growth may have taken.

It will be well to restate at this place one of the principal aims of anthropological research. We agreed that certain laws exist which govern the growth of human culture, and it is our endeavor to discover these laws. The object of our investigation is to find the *processes* by which certain stages of culture have developed. The customs and beliefs themselves are not the ultimate objects of research. We desire to learn the reasons why such customs and beliefs exist—in other words, we wish to discover the history of their development. The method which is at present most frequently applied in investigations of this character compares the variations under which the customs or beliefs occur and endeavors to find the common psychological cause that underlies all of them. I have stated that this method is open to a very fundamental objection.

We have another method, which in many respects is much safer. A detailed study of

customs in their bearings to the total culture of the tribe practicing them, and in connection with an investigation of their geographical distribution among neighboring tribes, afford us almost always a means of determining with considerable accuracy the historical causes that led to the formation of the customs in question and to the psychological processes that were at work in their development. The results of inquiries conducted by this method may be three-fold. They may reveal the environmental conditions which have created or modified cultural elements; they may clear up psychological factors which are at work in shaping the culture; or they may bring before our eyes the effects that historical connections have had upon the growth of the culture.

We have in this method a means of reconstructing the history of the growth of ideas with much greater accuracy than the generalizations of the comparative method will permit. The latter must always proceed from a hypothetical mode of development, the probability of which may be weighed more or less accurately by means of observed data. But so far I have not yet seen any extended attempt to prove the correctness of a theory by testing it at the hand of developments with whose histories we are familiar. This method of starting with a hypothesis is infinitely inferior to the one in which by truly inductive processes the actual history of definite phenomena is derived. The latter is no other than the much ridiculed historical method. Its way of proceeding is, of course, no longer that of former times when slight similarities of culture were considered proofs of relationships, but it duly recognizes the results obtained by comparative studies. Its application is based, first of all, on a well-defined, small geographical territory, and its comparisons are not extended beyond the limits of the cultural

area that forms the basis of the study. Only when definite results have been obtained in regard to this area is it permissible to extend the horizon beyond its limits, but the greatest care must be taken not to proceed too hastily in this, as else the fundamental proposition which I formulated before might be overlooked, viz: that when we find an analogy of single traits of culture among distant peoples the presumption is not that there has been a common historical source, but that they have arisen independently. Therefore the investigation must always demand continuity of distribution as one of the essential conditions for proving historical connection, and the assumption of lost connecting links must be applied most sparingly. This clear distinction between the new and the old historical methods is still often overlooked by the passionate defenders of the comparative method. They do not appreciate the difference between the indiscriminate use of similarities of culture for proving historical connection and the careful and slow detailed study of local phenomena. We no longer believe that the slight similarities between the cultures of Central America and of eastern Asia are sufficient and satisfactory proof of a historical connection. On the contrary, analogy of other similarities make such a connection improbable. But, on the other hand, no unbiased observer will deny that there are very strong reasons for believing that a limited number of cultural elements found in Alaska and in Siberia have a common origin. The similarities of inventions, customs and beliefs, together with the continuity of their distribution through a comparatively small area, are a satisfactory proof of this opinion. But it is not possible to extend this area safely beyond the limits of Columbia River in America and northern Japan in Asia. This method of anthropological research is represented in our country by Prof. F. W. Put-

nam and Prof. Otis T. Mason; in England by Dr. E. B. Tylor; in Germany by Friedrich Ratzel and his followers.

It seems necessary to say a word here in regard to an objection to my arguments that will be raised by investigators who claim that similarity of geographical environment is a sufficient cause for similarity of culture, that is to say, that, for instance, the geographical conditions of the plains of the Mississippi basin necessitate the development of a certain culture. There are those who would even go so far as to believe that similarity of form of language may be due to environmental causes. Environment has a certain limited effect upon the culture of man, but I do not see how the view that it is the primary moulder of culture can be supported by any facts. A hasty review of the tribes and peoples of our globe shows that people most diverse in culture and language live under the same geographical conditions, as proof of which may be mentioned the ethnography of East Africa or of New Guinea. In both these regions we find a great diversity of customs in small areas. But much more important is this: Not one observed fact can be brought forward in support of this hypothesis which cannot be much better explained by the well known facts of diffusion of culture; for archæology as well as ethnography teach us that intercourse between neighboring tribes has always existed and has extended over enormous areas. In the Old World the products of the Baltic found their way to the Mediterranean and the works of art of the eastern Mediterranean reached Sweden. In America the shells of the ocean found their way into the innermost parts of the continent and the obsidians of the West were carried to Ohio. Inter-marriages, war, slavery, trade, have been so many sources of constant introduction of foreign cultural elements, so that an assimilation of culture must have taken

place over continuous areas. Therefore, it seems to my mind that where among neighboring tribes an immediate influence of environment cannot be shown to exist, the presumption must always be in favor of historical connection. There has been a time of isolation during which the principal traits of diverse cultures developed according to the character and environment of the tribes. But the stages of culture representing this period have been covered with so much that is new and that is due to contact with foreign tribes that they cannot be discovered without the most painstaking isolation of foreign elements.

The immediate results of the historical method are, therefore, histories of the cultures of diverse tribes which have been the subject of study. I fully agree with those anthropologists who claim that this is not the ultimate aim of our science, because the general laws, although implied in such a description, cannot be clearly formulated nor their relative value appreciated without a thorough comparison of the manner in which they assert themselves in different cultures. But I insist that the application of this method is the indispensable condition of sound progress. The psychological problem is contained in the results of the historical inquiry. When we have cleared up the history of a single culture and understand the effects of environment and the psychological conditions that are reflected in it we have made a step forward, as we can then investigate in how far the same causes or other causes were at work in the development of other cultures. Thus by comparing histories of growth general laws may be found. This method is much safer than the comparative method, as it is usually practiced, because instead of a hypothesis on the mode of development actual history forms the basis of our deductions.

The historical inquiry must be consid-

ered the critical test that science must require before admitting facts as evidence. By its means the comparability of the collected material must be tested, and uniformity of processes must be demanded as proof of comparability. It may also be mentioned that when historical connection between two phenomena can be proved, they must not be admitted as independent evidence.

In a few cases the immediate results of this method are of so wide a scope that they rank with the best results that can be attained by comparative studies. Some phenomena have so immense a distribution that the discovery of their occurrence over very large continuous areas proves at once that certain phases of the culture in these areas have sprung from one source. Thus are illuminated vast portions of the early history of mankind. When Prof. Morse showed that certain methods of arrow release are peculiar to whole continents it became clear at once that the common practice that is found over a vast area must have had a common origin. When the Polynesians employ a method of fire making consisting in rubbing a stick along a groove, while almost all other peoples use the fire drill, it shows their art of fire making has a single origin. When we notice that the ordeal is found all over Africa in certain peculiar forms, while in those parts of the inhabited world that are remote from Africa it is found not at all or in rudimentary forms only, it shows that the idea as practiced in Africa had one single origin.

The great and important function of the historical method of anthropology is thus seen to lie in its ability to discover the processes which in definite cases led to the development of certain customs. If anthropology desires to establish the laws governing the growth of culture it must not confine itself to comparing the results of the growth alone, but whenever such is feasible



it must compare the processes of growth, and these can be discovered by means of studies of the cultures of small geographical areas.

Thus we have seen that the comparative method can hope to reach the grand results for which it is striving only when it bases its investigations on the historical results of researches which are devoted to laying clear the complex relations of each individual culture. The comparative method and the historical method, if I may use these terms, have been struggling for supremacy for a long time, but we may hope that each will soon find its appropriate place and function. The historical method has reached a sounder basis by abandoning the misleading principle of assuming connections wherever similarities of culture were found. The comparative method, notwithstanding all that has been said and written in its praise, has been remarkably barren of definite results, and I believe it will not become fruitful until we renounce the vain endeavor to construct a uniform systematic history of the evolution of culture, and until we begin to make our comparisons on the broader and sounder basis which I ventured to outline. Up to this time we have too much reveled in more or less ingenious vagaries. The solid work is still all before us.

FRANZ BOAS.

*PRINCETON IN THE NATION'S SERVICE.\**

It used to be taken for granted—did it not?—that colleges would be found always on the conservative side in politics (except on the question of free trade); but in this latter day a great deal has taken place which goes far toward discrediting the presumption. The college in our day lies very near, indeed, to the affairs of the world. It is a place of the latest experiments; its

\* Concluding part of Prof. Woodrow Wilson's oration at the Princeton Sesquicentennial Exercises. Reprinted from *The Forum* for December, 1896.

laboratories are brisk with the spirit of discovery; its lecture rooms resound with the discussion of new theories of life and novel programmes of reform. There is no radical like your learned radical, bred in the schools; and thoughts of revolution have in our time been harbored in universities as naturally as they were once nourished among the Encyclopedists. It is the scientific spirit of the age which has wrought the change. I stand with my hat off at very mention of the great men who have made our age an age of knowledge. No man more heartily admires, more gladly welcomes, more approvingly reckons the gain and the enlightenment that have come to the world through the extraordinary advances in physical science which this great age has witnessed. He would be a barbarian and a lover of darkness who should grudge that great study any part of its triumph. But I am a student of society and should deem myself unworthy of the comradeship of great men of science should I not speak the plain truth with regard to what I see happening under my own eyes. I have no laboratory but the world of books and men in which I live; but I am much mistaken if the scientific spirit of the age is not doing us a great disservice, working in us a certain great degeneracy. Science has bred in us a spirit of experiment and a contempt for the past. It has made us credulous of quick improvement, hopeful of discovering panaceas, confident of success in every new thing.

I wish to be as explicit as carefully chosen words will enable me to be upon a matter so critical, so radical as this. I have no indictment against what science has done: I have only a warning to utter against the atmosphere which has stolen from laboratories into lecture rooms and into the general air of the world at large. Science—our science—is new. It is a child of the nineteenth century. It has trans-